SAXIFRAGES ON MOUNT WASHINGTON

In Rhodora 69: 483-486, three brief articles were published regarding the rediscovery of *Saxifraga Aizoon* Jacq. and *Saxifraga cernua* L. in Huntington Ravine on Mt. Washington. These plants were first discovered by Dr. John Churchill in 1939 but were apparently not seen again until 1967 when Steele, Hodgdon and James Teeri relocated them. Although it was not possible to reach the plants because of the steepness of the cliff, observations were made through field glasses. *Saxifraga Aizoon* was growing in some abundance on a nearly flat ledge about twenty feet above a vantage point which was reached without too much difficulty. The plants in full bloom with conspicuous typical lime encrusted leaves, were unmistakable even when viewed at a distance of 100 feet from the bottom of the cliff. On a steep shelf at a distance of forty feet from the vantage point, Hodgdon detected a single flower which he believed to be *Saxifraga cernua,* a plant he had become familiar with on an Alaskan expedition. Steele, although not familiar with the plant was skeptical and unwilling to accept the identification. The plant was completely inaccessible so there seemed to be no way to resolve the question without the aid of rockclimbers.

Upon learning of the dilemma, Countryman undertook to secure the aid of members of Norwich University's Mountain Rescue Team. Accordingly, another expedition was organized in 1970 consisting of Countryman, Hodgdon, Steele and three technical rock climbers from Norwich. The vantage point below the *Saxifraga Aizoon* shelf was easily reached but it was then discovered that nearly all the soil and vegetation was gone from the ledge, presumably having been removed by avalanche or flood, a matter which emphasized the extreme ecological instability of the whole area. The date of this expedition, Aug. 2, was past the flowering time of the saxifrages and at first none were in evidence. Soon Hodgdon, with the aid of field glasses,

was able to locate some plants of *S. Aizoon* on a ledge above the original shelf. Ray Quirk, a rock climbing instructor at Norwich, undertook to investigate, assisted by John P. Quirk and Jon W. Walsh, both undergraduates at that institution. The ledge was very steep and the rocks unstable, but with the use of direct aid in the form of pitons and a sling and tension from below, Quirk was eventually able to reach the site. Guided by instructions from below he was able to obtain small but unmistakable portions of both saxifrages, these being the first collections from Mt. Washington since 1939. It would have been desirable to investigate another ledge but the lateness of the hour prevented this.

After this trip, in discussing the 1967 expedition, a friendly dispute broke out between Steele and Hodgdon as to the exact location of the *Saxifraga cernua* observed at the time. To settle this point, and because one promising shelf still had not been investigated, another expedition was organized by Steele in 1971, with a date selected for what was believed to be the height of the flowering season of both plants. Two rock climbers accompanied the expedition. From the vantage point eighty feet up the cliff, *S. cernua* was readily observed in flower on a vegetation covered shelf below the original *S. Aizoon* ledge. With the aid of a rope and a good belay from Paul Henle, Nathaniel Steele was able to reach the slope. He made some careful observations and collected one fragment of a plant plus some leaves. There were seven plants of *S. cernua* in bloom plus some patches of leaves. The slope was steep and unstable with many loose rocks. It would not be difficult for all the vegetation to be dislodged in a slide.

Steele (senior) searched the whole area carefully with field glasses and eventually located a small clump of *S. cernua* leaves in a small pocket near the original *S. Aizoon* ledge. On the higher ledge explored in 1970, a considerable amount of *S. Aizoon* was observed in full bloom. The onset of a thunderstorm prevented any further exploration, but presumably *S. cernua* was there also.

The narrow gully continues very steeply above this site nearly to the head of the ravine, but overhanging rock makes it impossible to see into it from the bottom; thus it is possible there are colonies of saxifrage farther up, seeds from which might occasionally wash down and colonize suitable areas. It would appear this possibility could be confirmed only by a team of strong rock climbers.

For any who might be inclined to investigate this or other rare alpine plants, the authors suggest the following as a result of their experiences. High powered field glasses are very useful. Careful notes should be taken at the time as to what is observed. Drawings and photographs of the locality would be most helpful. A camera equipped with a telephoto lens would make an excellent record of the plant. All information thus obtained could be put on an herbarium sheet.

It may seem strange that Dr. Churchill was able to discover new plants in an area that had long been heavily botanized. He was fortunate in that he was doing his explorations during the short flowering season. His very conscientious exploration and mountaineering ability no doubt led him to the vantage point eighty feet from the bottom from which he could observe the plants without field glasses. How he was able to manage the last twenty feet without a rope and a belay from a second remain a mystery to the various technical rock climbers who have visited the area. The area is ecologically unstable and there is a slight possibility that he collected his plants from a station lower down that is now extinct. Because of the instability the authors feel that further exploration is inadvisable in that it might lead to destruction of the very limited habitat.

Records for the plants now exist in the herbaria of the University of Michigan, the New England Botanical Club, the University of New Hampshire, Norwich University and the Steele private herbarium in Tamworth, New Hampshire.

FREDERIC L. STEELE
THE WHITE MOUNTAIN SCHOOL
LITTLETON, NEW HAMPSHIRE 03561